What is claimed is:

~~CLAIMS~~

1. Process for the manufacture of 1-chloro-1-fluoroethane and/or 1,1-difluoroethane by reaction between hydrogen fluoride and vinyl chloride in the liquid phase, wherein the hydrogen fluoride and the vinyl chloride are introduced into an organic solvent consisting of at least one saturated halogen containing hydrocarbon.

2. ~~Process~~ The process according to Claim 1, wherein the saturated halogen-containing hydrocarbon is selected from chloro-, fluoro- or chlorofluorohydrocarbons containing from 1 to 8 carbon atoms.

3. ~~Process~~ The process according to Claim 2, wherein a saturated halogen-containing hydrocarbon of the process is used as solvent.

4. ~~Process~~ The process according to Claim 1, wherein the reaction mixture contains, at all times, at least 55% by weight of solvent.

5. ~~Process~~ The process according to Claim 1, wherein the introduction of the vinyl chloride and hydrogen fluoride is controlled so that, at all times, the vinyl chloride content is less than 15% and that of hydrogen fluoride is less than 30% of the weight of the reaction mixture.

6. ~~Process~~ The process according to Claim 1, wherein the molar ratio between the hydrogen fluoride and the vinyl chloride used is at least 1 and does not exceed 20.

7. ~~Process~~ The process according to Claim 1, wherein the reaction is carried out in the presence of a hydrofluorination catalyst chosen from derivatives of metals of groups IIIa, IVa, IVb, Va, Vb and VIb of the Periodic Table of the elements, and their mixtures.

8. ~~Process~~ The process according to Claim 1, wherein the reaction is performed at a temperature of at least 40°C and not exceeding 130°C and at a pressure at least equal to 2 bar and not exceeding 50 bar.

9. Process according to Claim 1, wherein the desired product is withdrawn continuously from the reaction mixture.

10. Process according to Claim 9, applied to the

production of 1,1-difluoroethane, wherein it is withdrawn in gaseous form.